

**REMARKS**

This Amendment is filed in response to the Office Action dated January 20, 2010 (the "Office Action").

**STATUS OF THE CLAIMS**

Claims 1-17 were pending at the date of the Office Action, and all claims stand rejected.

In order to help narrow the issues, claim 9, which originally had multiple dependency to claim 7 or claim 8, has been amended to depend only from claim 7. New claim 18 has been added to recite the other dependency of original claim 9 (i.e., claim 18 recites claim 9 as it depends from claim 8). No new matter is added by this amendment.

**PRIOR ART REJECTIONS**

The Office Action rejects all of the claims under 35 U.S.C. § 103(a). Under 35 U.S.C. § 103, the Patent Office bears the burden to establish a prima facie case of obviousness. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). According to the Office's promulgated guidelines and the controlling law, three basic criteria must be met to establish a prima facie case of obviousness:

- First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- second, there must be a reasonable expectation of success; and
- third, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

*See, e.g.*, M.P.E.P. § 2143. In applying these criteria, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Additionally, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed

modification. *In re Gordon*, 733 F.2d 900, 221 (Fed. Cir. 1984); *see also*, M.P.E.P. § 2143.01. Similarly, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959).

An “expansive and flexible approach” should be applied when determining obviousness based on a combination of prior art references. *See, e.g., KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, at 1739 (2007). However, a claimed invention combining multiple known elements is *not* rendered obvious simply because each element was known independently in the prior art. *Id.* at 1741. Rather, there still must be some “reason that would have prompted” a person of ordinary skill in the art to combine or modify the elements in the specific way that he or she did. *Id.; In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1380 (Fed. Cir. 2007); *and KSR*, 127 S. Ct. at 1740-41. Stated differently, the mere fact that references *can* be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990).

As explained in more detail below, the claim rejections are respectfully traversed because they do not satisfy various aspects of the obviousness inquiry.

#### **Claims 1, 2, 7-9 and 14-17**

Claims 1, 2, 7-9 and 14-17 are rejected as allegedly being unpatentable over U.S. Pat. No. 7,013,528 (“Parker”) in view of U.S. Pat. No. 6,021,545 (“Delgado”). This rejection is respectfully traversed.

Parker discloses a floor cleaner having a rotating brush (32) and a dust pad assembly (20) that holds a cleaning cloth. There are two versions of the Parker device: one uses a conventional low-power cordless vacuum fan assembly (52) that is powered by a battery pack (76), *see Parker*, Figs. 1-17, and the other uses a dirt-throwing arrangement in which a brush (174) projects dirt into an open dust collection bin (176) behind the brush. *Id.*, Figs. 18-19. In all cases, the brush (32/174) is located in front of the dust pad assembly (20), so that the brush cleans large particles from the floor, and the dust pad assembly cleans smaller particles. Parker fails to disclose any

kind of liquid deposition system that applies a liquid indirectly or directly to the cleaning cloth.

Delgado discloses a vacuum cleaner attachment (1) that connects to a vacuum cleaner via a suction hose. The particular disclosure relied upon in the Office Action is the embodiment illustrated in Figures 27-31. This embodiment has a suction channel (28) that terminates at a lip (17) in which elongated suction channel mouth (15) is formed. A liquid supply tank (23) and a cloth-covered liquid applicator (21) are slidably mounted on the suction channel (28), such that they can move back and forth relative to the lip (17). This relative motion is illustrated in Figures 28-31, which show the applicator (21) in contact with the surface as the lip (17) is moved towards the surface, and then as the whole assembly is tilted downwards with the lip (17) remaining in contact.

The Office Action combines these references under the notion that:

[i]t would have been obvious to one of ordinary skill in the art to modify the cloth holder of Parker et al., with the known technique or distributing liquid onto a cleaning cloth, as taught by Delgado et al., and the results would have been predictable. In this situation, one could provide a continuous supply of cleaning liquid onto a cloth thereby more effectively cleaning various surfaces while also enabling continuous working on said surfaces in one operation.

Office Action at 3. This combination is respectfully traversed.

To begin with, neither reference explicitly suggests the combination recited in the present claims. Parker says nothing about applying liquid to the cloth. Delgado says nothing about operating a wetted cloth in combination with a rotating cleaning brush. The allegation upon which the combination is based is that applying the liquid to the cloth as shown in Delgado would have made cleaning more effective and enabled continuous working. Neither the Office Action nor the prior art explains how the combination would actually provide more effective cleaning, and gives no basis for the conclusion that a person of ordinary skill in the art would have known this fact prior to the present application. It is well settled that a cursory statement such as this is insufficient to establish *prima facie* obviousness. *See* M.P.E.P. § 2143.01.IV. Indeed, given the lack of any suggestion to combine in the prior art, it appears that the Office Action improperly uses hindsight reconstruction to combine the references, using the claims as a roadmap.

The proposed combination also overlooks technical problems with the combination, as well as teachings against the proposed combination. To begin with, it should be noted that the Delgado device has two very stringent operating requirements. First, it is constructed to operate only in one a particular direction: the wetted cleaning cloth (95) must be pulled ahead of the lip (17), so that the fluid is sucked into the suction channel mouth (15) (see arrow “A” in Figure 28, showing direction of movement). This arrangement is *critical* in Delgado. Delgado explains that prior art devices are disadvantageous because they require multiple cleaning steps. Delgado, col. 1, ll. 10-29. Delgado purports to overcome this disadvantage by providing “continuous working on surfaces,” which is “achieved in that for the purposes of continuous working the liquid applicator is arranged for the continuous supply of liquid *and the mouth of the suction channel is located downstream of the applicator*, relative to an application direction.” *Id.* at col. 1, ll. 44-48 (emphasis added). In addition, in order to provide this “continuous” cleaning, Delgado must include a vacuum source to generate a vacuum at the suction channel, otherwise the dirty fluid will remain on the surface.

In contrast to Delgado, the Parker device can be operated in either direction — that is, either by moving the brush before the pad, or by moving the pad before the brush. The fact that Parker can be operated with the brush (and thus the suction inlet) in front of the pad is a significant problem, because Delgado specifically requires the inlet to be *behind* the cleaning pad. Thus, Delgado clearly teaches away from any combination with Parker, because Parker provides movement in the *opposite* direction required by Delgado. In short, Parker does exactly what Delgado says *not* to do. Persons of ordinary skill in the art, understanding the Delgado requires movement in a particular direction, would not combine Delgado’s teachings with a reference like Parker that provides movement in exactly the opposite direction.

Even if one ignored the foregoing clear teaching against the combination, there still is a significant problem that teaches against the proposed combination. Unlike Delgado, which requires a suction source, Parker shows embodiments that do not include a suction source (*see, e.g.*, Figs. 18-19). In fact, it is this embodiment that is relied upon to make the current rejection, because this is the only embodiment of Parker that includes a “dust collecting container being adapted to receive, via a dust inlet (23), dust particles *thrown* by the brush arrangement (15),” as

recited in claim 1.<sup>1</sup> The problem is that Delgado specifically requires a suction source to provide the desired “continuous” cleaning. As noted above, without a suction source behind the cleaning cloth, Delgado will fail at its intended purpose. Thus, the proposed combination requires both for Delgado to travel in the direction opposite to its specified direction, and for Delgado to sacrifice the necessary vacuum source. Clearly, the necessity of both of these features would compel a person of ordinary skill in the art *not* to combine these references as suggested, because these modifications are contrary to Delgado’s stated requirements and would render Delgado unsuitable for its intended purpose.

Even if one assumes, for the sake or argument, that Delgado does not teach against combining with Parker, there still is no motivation to combine the references because the proposed combination would create significant problems that would dissuade any such combination. If the Parker device were modified to deposit fluid on the pad, the liquid would soak the floor and any dirt in front of the brush whenever the device is moved with the pad ahead of the inlet. This would make it significantly more difficult to throw the dirt into the dust collection bin or remove it via suction (particularly in a low-power battery-operated device like Parker). The wet particles would tend to hydrostatically adhere to the brush, particularly where smaller particles and dust are present, and the brush would spray the liquid and dirt in all directions. The resulting wet dirt spray would be unattractive and unsanitary, and may work into the seams of the machine to reach the electronics. Adding water to the dirt also would cause it to accumulate into large clumps that are likely to be too heavy to project all the way to the bin even if they do dislodge from the brush. Such clumps would have to be removed by the cleaning pad, which may not be possible given that such pads typically are used to clean only light amounts of dirt. In short, wetting the dirt and then striking it with the rotating brush would create a significant mess, and clearly would reduce the dirt-collecting capabilities of the Parker device. Thus, rather than enhancing cleaning efficiency, as proposed by the Examiner, the combination actually would *decrease* cleaning efficiency. For this additional reason, there is no motivation to

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<sup>1</sup> In contrast, the embodiments of Parker that use a vacuum fan do not have containers that can receive “thrown” particles — rather, those particles are removed to the container by a suction stream. Stated differently, the container in a vacuum-assisted model would be incapable of receiving particles that are merely “thrown” by the brush, as recited in the claims.

combine the references as suggested.

There are also other problems with the proposed combination. For example, Delgado uses capillary-action bristles to convey fluid from the fluid reservoir to the cloth, and it is questionable whether that arrangement would work in a floor care setting in which pressure on the bristles would cause them to bend and possibly lose their capillary wicking capability. Also, Delgado shows a window-washing device that is operated in the vertical position, and it appears that turning the device 90 degrees to a horizontal orientation to use with Parker would cause the fluid to seep uncontrollably through the capillary bristles and to the cloth, which would render the device useless.

In view of the foregoing, the Applicant respectfully submits that there is no *prima facie* case of obviousness because combining Parker with Delgado (a) is contrary to and taught against by Delgado, and (b) would render Parker unsatisfactory for its intended purpose. The problems associated with the combination teach away from the combination, rather than support it.

### **Claims 3-6 and 10-13**

Claims 3-6 and 10-13 are rejected as allegedly being unpatentable over the combination of Parker and Delgado, in further view of U.S. Pat. No. 3,319,278 (“Frazer”). These rejections are also respectfully traversed.

This rejection is essentially the same as the rejection levied against claims 3-6 in the prior action. In the prior reply, the Applicant pointed out that there are technical problems with the combination that would have dissuaded persons of ordinary skill in the art from making the combination. For example, the Frazer device is a non-motorized brushroll for use on rugs, whereas the brush in Parker is motorized and for use on hard floors, and neither reference teaches or reasonably suggests how one could make a multi-part brushroll like the one in Frazer motorized. In fact, because it is motorized, Parker’s brush rotates in the opposite direction as Frazer’s brush. Furthermore, the Office Action once again overlooks the significant problem that using two unaligned motorized brushes leads to the problem that the brush with the greatest load on it will tend to pull the cleaner along its direction of rotation, and thus using angled brushes on Parker could lead to steering issues that are likely to teach away from the proposed combination. The Applicant’s prior arguments are incorporated herein by reference.

The Office Action does not respond to these legitimate concerns. Indeed, the argument seems to simply be that the combination “could” be made: “[b]y forming a brush arrangement such that the brushes form a V-shape one could provide a vertex angle that is selectively adjustable, thereby more effectively removing material from the surface being cleaned.” Office Action at 6. The basis of the argument is unclear because Frazer and the present invention operate according to essentially opposite principles. In Frazer, the brush is not being powered, and therefore it is being dragged through the carpet like a comb or a hairbrush. In order for Frazer to remove particles, the brush must not simply roll over the carpet — rather, it must comb through the carpet fibers. To do this, Frazer angles the brushes so that their movement “is partly a rolling motion and partly a dragging movement to effect good penetration of the brush bristles into the nap of the carpeting.” Frazer at col. 1, ll. 41-43. Frazer changes the angle to vary the drag. *Id.* at col. 1, ll. 46-51. The greater the angle, the deeper the Frazer brush will dig into the carpet as it is being pushed forward, and the less it will roll. The claimed invention, on the other hand, uses *powered* brushes that rotate in the forward direction to throw dirt and debris backwards. That is, the invention actively rotates the brushes in the opposite direction as the brushes in Frazer. Frazer says nothing about how angling the brushes would help — or hinder — the cleaning operation when used with a powered brush that rotates opposite to the direction found in Frazer, and it is not clear to Applicant how that conclusion can be drawn without reference solely to the present invention. Thus, due to the mechanical differences between the prior art and the claimed invention, it appears that the basis for the combination is found nowhere but in the present disclosure, which is an impermissible hindsight reconstruction.

In view of the foregoing, the Applicant respectfully submits that there is no *prima facie* case of obviousness because there is no reasonable expectation that the combination would be successful (because it is not even taught how to make the combination work), problems like steering issues caused by non-parallel brushes would teach away from the combination or render the Parker device unsatisfactory for its intended purpose, and the alleged basis for making the combination appears to be found solely in the present disclosure.

### **Claims 9 and 14-17**

Claims 9 and 14-17 are rejected based on the combination of Parker and Delgado

discussed above. In addition to the foregoing reasons, the rejections of claims 9 and 14-17 are defective for at least the following reasons.

Claim 9 depends from claim 7, and recites a liquid container that is an integrated part of the cloth holder, and that the cloth holder is removably arranged on the base. Claims 14-17 also recite that the cloth holder is removably arranged on the base, and the liquid container is part of the cloth holder. The prior art fails to disclose or reasonably suggest a *removable* cloth holder with the liquid container being part of the cloth holder, as recited in these claims.

The Office Action appears to contend that Delgado discloses a removable cloth holder, but does not specifically state where this teaching is found. In fact, Delgado appears to show only a *movable* cloth holder, not a *removable* one. As shown in Figures 27-31, one embodiment of Delgado has a combined cloth holder/liquid supply tank that is movable mounted on a suction channel (28). Notable, Delgado does not state that these parts can actually be removed — that is to say, completely separated — from the rest of the device. Rather, they remain connected at all times. This structure does not anticipate or render obvious the invention recited in claims 9 and 14-17, which requires a *removable* cloth holder. Thus, it is respectfully submitted that this rejection is not proper and fails to establish *prima facie* obviousness. *See* M.P.E.P.

§ 2143.01.IV.

In view of the foregoing, the Applicant respectfully submits that there is no *prima facie* case of obviousness because the alleged combination fails to teach all of the claim limitations, the proposed modification goes well beyond any of the teachings in the cited art, and there is no reasonable expectation that the modification would be successful.

## CONCLUSION

For at least the foregoing reasons, the Applicant respectfully requests reconsideration of the pending rejections, and allowance of the claims. If the Examiner believes that prosecution might be advanced by discussing the application with the Applicant's counsel, in person or by telephone, the Applicant's counsel welcomes the opportunity to do so.

Respectfully submitted,  
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